

Work Order ID 122764

July-23-14 11:55:32 AM

\*122764\*

Page 1

Item ID: D206-667-203BL

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 7/23/14 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 14-07-23 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D206-667-243	C
--------------	---

100

Document Control

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels as per PPP D206-667-203 CHG004

MLJ 14-09-03

D 14-09-03

DAS  
9  
9-89

110

BENDING MACHINE - CROSSTUBES

0.00

\*110\*

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D206-667-243 using CNC bender program 206L-AF

BL

14-07-29

120

QC15- Crosstube Dimensional Check

0.00

\*120\*

QC

Memo

0.00

Quality Control

DAS  
16  
9-89

14/07/29

Work Order ID 122764

\*122764\*

Page 2

July-23-14 11:55:32 AM

Item ID: D206-667-203BL Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue  
 Start Date: 7/23/14 Start Qty: 1.00 \*1\* Cust Item ID:  
 Required Date: 7/23/14 Req'd Qty: 1.00 \*1\* Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

0.00

\*130\*

Crosstubes

0.00

Crosstubes

Crosstubes

**Memo**

\*\*\*\*\* ENSURE PROPER JIG POSITIONING \*\*\*\*\*

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 and drill table DT8577. Locate hole #6 for towers as per QSI 10. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243

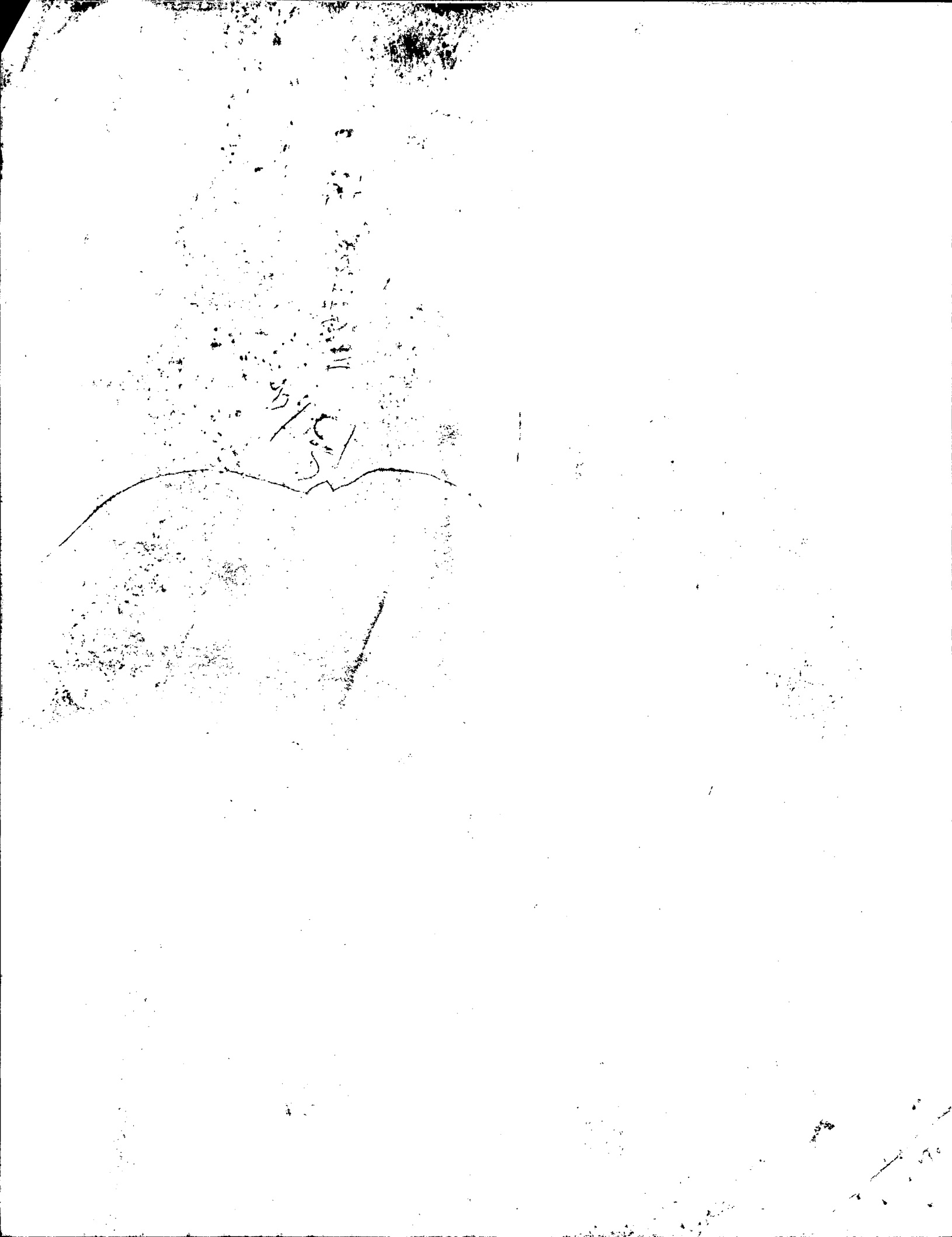
6-Drill Fwd rivet holes using drill Jig DT8787 FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT878 AFT as per Dwg D206-667-243.

8-C'sink holes as per Dwg D206-667-243.

9 -Scribe part # and batch # using vibrating stylus as per Dwg D206-667-243 Inside of Cuff (Donot engrave on outside of tube)

JW 14-07-30  
 DC



# Work Order ID 122764

July-23-14 11:55:32 AM

**\*122764\***

Page 3

Item ID: D206-667-203BL Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue  
 Start Date: 7/23/14 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 7/23/14 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

10 - \*\*\* WEAR LATEX GLOVES WHEN HANDLING  
 CROSSTUBE\*\*\*Deburr & Inspect for surface damage. Repair damage within  
 limits as per Dwg  
 D206-667-243

- DC 14/07/31

140

**\*140\***

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

\*\*\* WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE\*\*\*

DAS  
38  
9-89

14/07/31

DAS  
16  
9-89

14/07/31

150

**\*150\***

HandFXtube

Hand Finishing Crosstubes

0.00

Memo

0.00

\*\*\* WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE\*\*\*

1- CLEAN CROSSTUBE WITH WASH'N WIPE

DAS  
41  
9-89

14-8-6

Work Order ID 122764

July-23-14 11:55:32 AM

\*122764\*

Page 4

Item ID: D206-667-203BL

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14 Start Qty: 1.00 \*1\*

Cust Item ID:

Required Date: 7/23/14 Req'd Qty: 1.00 \*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

170

Outsource process - NDT per QSI038 4.1

0.00

\*170\*

PO 25318

Outsource2

Memo

0.00

Outsource process - NDT

\*\*\* WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE\*\*\*

Liquid Penetrant Inspection as per QSI 038 Or

Issue P/O: \_\_\_\_\_

LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

CMG 14/2/14

180

Packaging

0.00

\*180\*

Packaging

Memo

0.00

Packaging

\*\*\* WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE\*\*\*

Ensure copy of NDT results attached to work order.

Received

1X SP/4-8-15

190

QC5- Inspect part completeness to step on W/O

0.00

\*190\*

QC

Memo

0.00

Quality Control

\*\*\* WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE\*\*\*

Ensure results are as per Dwg D206-667-243

DAS  
16  
9-89 14/08/15

# Work Order ID 122764

July-23-14 11:55:32 AM

**\*122764\***

Page 5

Item ID: D206-667-203BL Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue  
 Start Date: 7/23/14 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 7/23/14 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
194		0.00							
<b>*1Q4*</b>									
HandFXtube	Memo	0.00							
Hand Finishing Crosstubes	*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***								
	1- PRESSURE WASH AND THEN USE WASH'N WIPE TO CLEAN CROSSTUBE BEFORE CHEMICAL CONVERSION								
196	QC7-Inspect Chemical Conversion Coat	0.00							
<b>*1Q6*</b>									
QC	Memo	0.00							
Quality Control	*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***								

BL  
 JW  
 14-08-19  
 1  
 DAS  
 41  
 9-89  
 14-8-15

# Work Order ID 122764

\*122764\*

Page 6

July-23-14 11:55:32 AM

Item ID: D206-667-203BL Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue  
 Start Date: 7/23/14 Start Qty: 1.00 \*1\* Cust Item ID:  
 Required Date: 7/23/14 Req'd Qty: 1.00 \*1\* Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	SprayPaint	0.00				1			DAS 41 9-89
*200*	SprayPaint	0.00							17-8-28
Spray Painting	Memo								
	*** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE***								
	1-Prime inside and outside crosstube as per QSI 005 4.2 — 2217.08.18								
	2-Paint outside crosstube as per QSI 005 4.2								
	PRIME: 128927								
	Start Time: 11:00								
	Finish Time: 11:20								
	PAINT: 128955								
	Start Time: 3:20								
	Finish Time: 3:50								
	Clear 129058								
210	QC14- Inspect Spray Paint	0.00							
*210*									DAS 9 9-89
QC	Memo	0.00							
Quality Control	Wrap in plastic bag to protect from scratches								

July-23-14 11:55:32 AM

**\*122764\***

Page 7

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 7/23/14      **Start Qty:** 1.00      **\*1\***

**Cust Item ID:**

**Required Date:** 7/23/14      **Req'd Qty:** 1.00      **\*1\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_      **Run**      **Start**      **\*NR1\***  
                  **QC:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **SPC (Y/N):** \_\_\_\_\_ **Date:** \_\_\_\_\_      **Stop**      **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220	0.00	DAS
-----	------	-----

**\*220\***

## Crosstubes

0.00

0.00

## Crosstubes

## Memo

## Crosstubes

1-Abrade mating surfaces of support and crosstube with 400 grit sandpaper, clean the area with 4105S wash 'n' wipe

**2-Install supports with Proseal 890 per DSI9565 and QSI 015**

A/R Proseal 890 Batch: 128638

3- Torque bolts as per dwg exp. 10/14

4-Install nut plates as per Dwg D206-667-243.

240

QC5- Inspect part completeness to step on W/O

0.00

**\*240\***

QC

## Memo

0.00

## Quality Control

**DAS**

9

9-89



# Work Order ID 122764

**\*122764\***

Page 8

July-23-14 11:55:32 AM

Item ID: D206-667-203BL Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue  
Start Date: 7/23/14 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 7/23/14 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Pick Kit	0.00							
<b>*250*</b>									
Packaging	Memo	0.00							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
<b>*260*</b>									
QC	Memo	0.00							
Quality Control									
270		0.00							
<b>*270*</b>									
Packaging	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-667-203								
	Location: _____								
	PPP Rev: _____								

14/9/2 12 32 9-89 DAS 06 9-89

14.09.03 9 9-89 DAS 06 9-89

SEP 03 2014 06 9-89

**Work Order ID 122764****\*122764\***

Page 9

July-23-14 11:55:32 AM

Item ID: D206-667-203BL

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 7/23/14 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

280

QC21- Final Inspection - Work Order Release

0.00

**\*280\***

QC

Memo

0.00

Quality Control

MLJ 14-09-04

MLJ 14-09-04

# Picklist Print

July-23-14 11:55:35 AM

Page 1

Work Order ID: 122764

**\*122764\***

Parent Item: D206-667-203BL

**\*D206-667-203BL \***

Parent Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14

Required Date: 7/23/14

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 10.10.29 now at chg003 DD verf:EC  
11.08.08 per ecn 11-615 dd verf:ec

ipp rev:b

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN5-10A		Purchased	No				Each	340.0000		[10]			
<b>*AN5-10A*</b>									**			DAS 32 9-89	DAS 06 9-89
BOLT													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				101					
				122800				101					
				Return2014				10					
				123528				10					
				ST362				22					
				M128634				22					
				st503				207					
				M126180				207		M126180			
AN5-32A		Purchased	No				Each	310.0000		[4]			
<b>*AN5-32A*</b>									**			DAS 32 9-89	DAS 06 9-89
Bolt													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST336				310					
				123523				4					
				124215				110					
				124805				4					
				m127363				4					
				m127550				30					
				m128403				8					
				m128634				150		M128634			

# Picklist Print

July-23-14 11:55:35 AM

Page 2

Work Order ID: 122764

**\*122764\***

Parent Item: D206-667-203BL

**\*D206-667-203BL \***

Parent Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14

Required Date: 7/23/14

Start Qty: 1.00

Required Qty: 1.00

AN5-34A

Purchased

No

Each

138.0000

**\*\***

**\*AN5-34A\***

Bolt

DAS  
9  
9-89

DAS  
32  
9-89

DAS  
06  
9-89

Location

Loc Qty

Loc Code

ST336

138

123525

4

m128403

34

m128634

100

M128403

D206-667-203TRN

Manufactured

No

Each

10.0000

**\*\***

**\*D206-667-203TRN\***

Crosstube Turning Detail

Location

Loc Qty

Loc Code

LG014

10

107546

1

107547

1

108690

1

108691

1

108692

1

108694

1

96976

1

96977

1

99460

1

99877

1

D2873-043

Manufactured

No

Each

52.0000

**\*\***

**\*D2873-043\***

Nut Plate Assembly

Location

Loc Qty

Loc Code

LG052

52

107964

4

113050

38

114550

10

2

July-23-14 11:55:35 AM

Shop Packet Print

Page 2

# Picklist Print

July-23-14 11:55:35 AM

Page 3

Work Order ID: 122764

**\*122764\***

Parent Item: D206-667-203BL

**\*D206-667-203BL \***

Parent Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14

Required Date: 7/23/14

Start Qty: 1.00

Required Qty: 1.00

D2873-045

Manufactured No

Each

55.0000

2

**\*D2873-045\***

**\*\***

Nut Plate Assembly

*CA 14-08-18*

Location

Loc Qty

Loc Code

LG052

55

113144

15

113886

40

*2*

D2892-1

Manufactured No

Each

28.0000

2

**\*D2892-1\***

**\*\***

Support

DAS  
41

9-89

*14-8-29*

Location

Loc Qty

Loc Code

LG014

28

115125

20

*115272*

8

*2*

D3595-063-450

Manufactured No

Each

184.0000

4

**\*D3595-063-450\***

**\*\***

Rubber Cushion

DAS  
41

9-89

*14-8-29*

Location

Loc Qty

Loc Code

FG

15

88422

5

94274

10

LG050

4

118828

4

LG051

165

109526

2

115083

100

*117650*

63

*4*

# Picklist Print

July-23-14 11:55:35 AM

Page 4

Work Order ID: 122764

**\*122764\***

Parent Item: D206-667-203BL

**\*D206-667-203BL \***

Parent Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14

Required Date: 7/23/14

Start Qty: 1.00

Required Qty: 1.00

MS20601-AD4W10

Purchased

No

Each

563.0000

14

**\*MS20601-AD4W10\***

**\*\***

*CR 14-08-18*

RIVET

Location

Loc Qty

Loc Code

LG050

432

M127301

30

M127578

2

M128594

100

M128701

300

LG051

131

M128718

131

MS21042L5

Purchased

No

Each

1,058.000

**\*MS21042L5\***

**\*\***

*DAS 06 9-89 14/7/2*

Nut

DAS

9

9-89

Location

Loc Qty

Loc Code

ST307

1058

117611

1

125684

8

m127304

3

m127813

500

m128810

46

m129472

500

MS21920-22

Purchased

No

Each

214.0000

**\*MS21920-22\***

**\*\***

DAS

41

9-89

*14-8-29*

Clamp

Location

Loc Qty

Loc Code

LG050

214

M127255

14

M128636

200

July-23-14 11:55:36 AM

Shop Packet Print

Page 4

# Picklist Print

July-23-14 11:55:36 AM

Page 5

Work Order ID: 122764

**\*122764\***

Parent Item: D206-667-203BL

**\*D206-667-203BI \***

Parent Item Name: Aft High Crosstube 206L/L1/L3/L4, Blue

Start Date: 7/23/14

Required Date: 7/23/14

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0563J

Purchased

No

Each

2,625.000

[18]

**\*NAS1149D0563J\***

Washer

**\*\***

DAS  
32

DAS  
06

9-89

9-89

DAS  
9  
9-89

Location

Loc Qty

Loc Code

GA

129

m125807

129

ST510a

2496

m126319

504

m128257

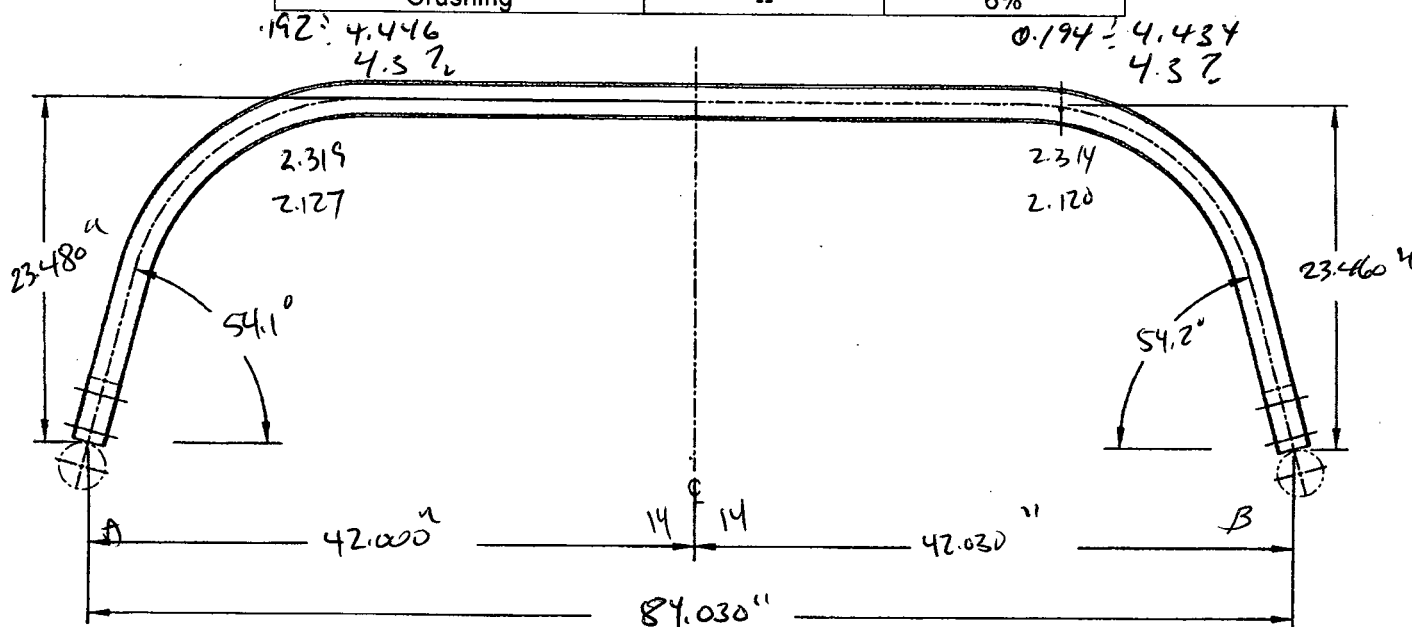
1992

14/8/2 ①

m128257

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	122764
<b>Description:</b> Crosstube High Aft (206L)		<b>Part Number:</b>	D206-667-203
<b>Inspection Dwg:</b> D206-667-243 <b>Rev:</b> C		<b>Page 1 of 1</b>	

Required Dimension	Min	Max
Height	23.39	23.65
1/2 Span	41.79	42.05
Angle	54	56
Total Span	83.58	84.1
Bending Passes	8	--
Crushing	--	6%



	Side A	Side B
<b>Bending Passes</b>	14	14
<b>Crushing</b>	4.37	4.37
<b>Comments</b>		
Side A = 4.37 crush @ 14 Passes		
Side B = 4.37 crush @ 14 Passes		

<b>DAS</b>	
<b>QC15 Inspection</b>	16
<b>Date</b>	9-89 17/6/29

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	09.11.17	Dwg Rev updated	KJ	
C	09.12.14	Dimensions update per Dwg Rev C	KJ	
D	12.04.16	Added bending, crushing dimensions	KJ	



Item	Qty -243	Part Number	Description
1	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

#### GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6004-115  
FINISHED LENGTH = 104.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON  
INSIDE OF CLIFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY,  
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE  
TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER  
QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE  
D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE  
LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS  
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT  
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN  
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER

NO 122764 MLJ

14-07-23

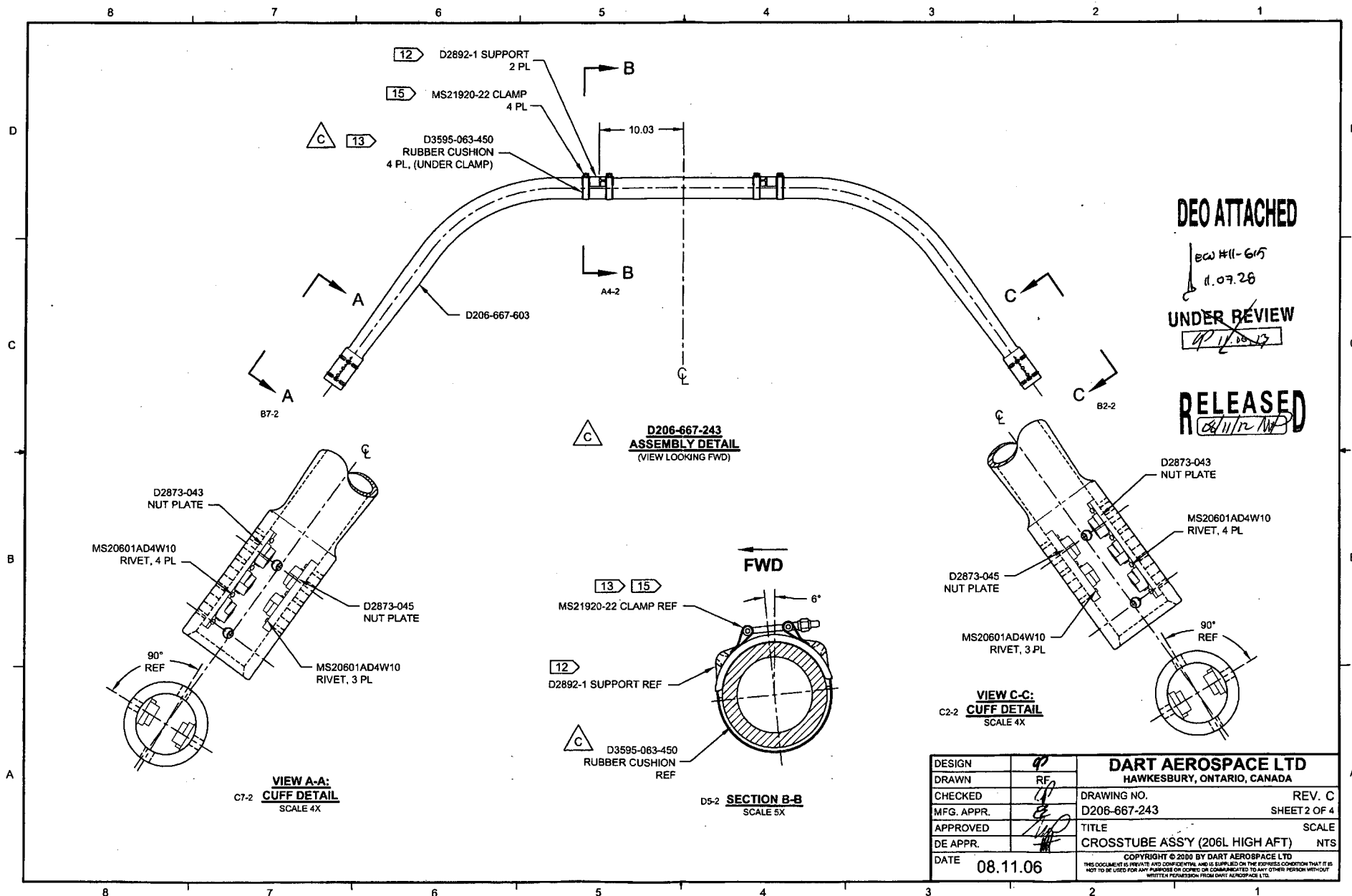
DEO ATTACHED

ECO #11-615  
11.07.28

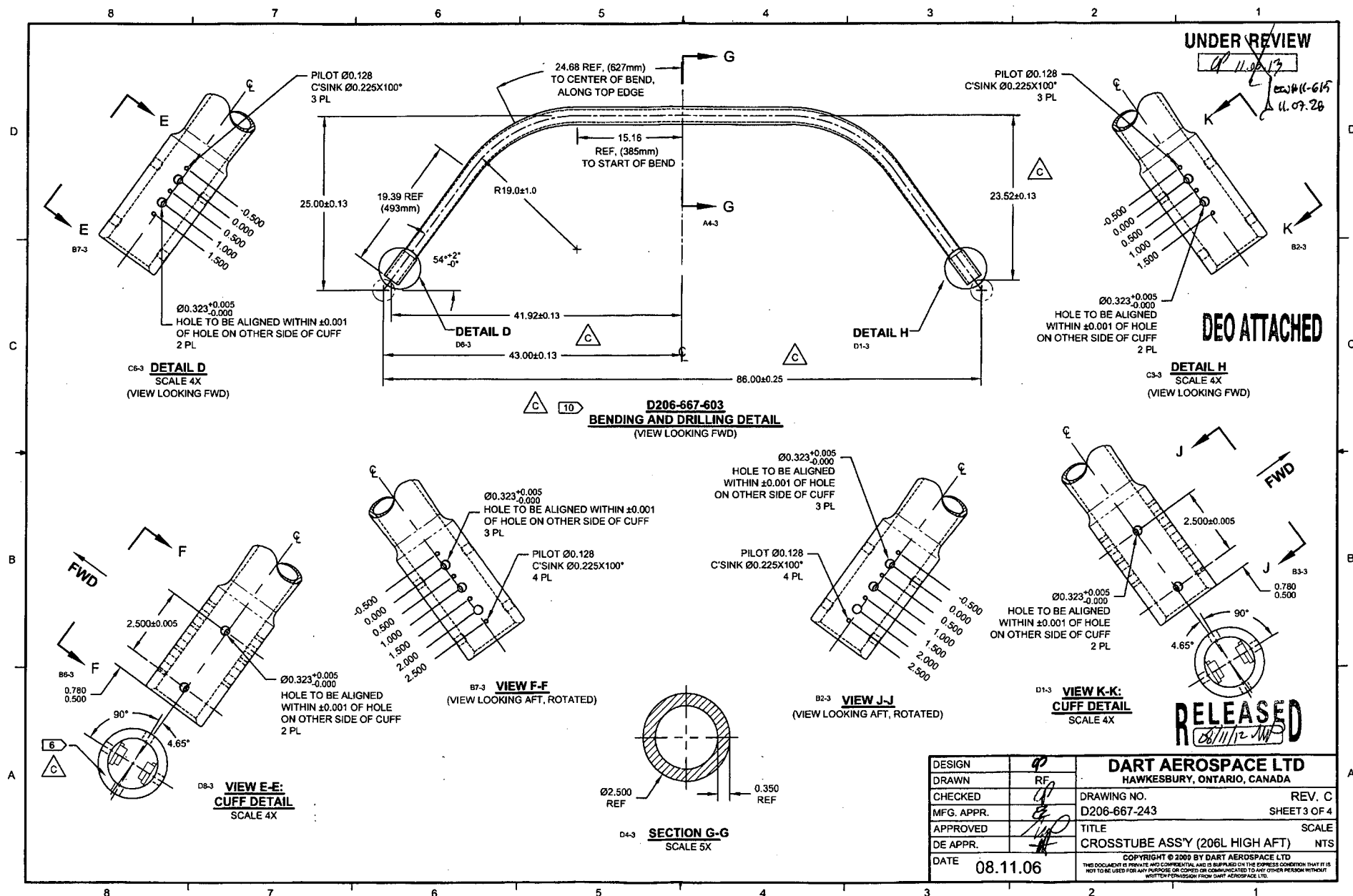
UNDER REVIEW

RELEASED

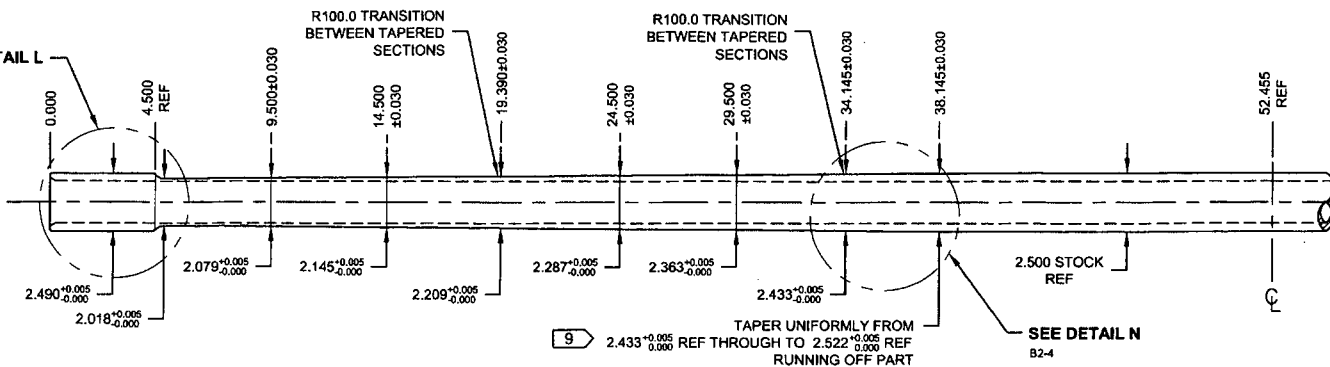
C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2856-400-773 (ZN D8-2 & A5-2); REMOVED REF: & ADD TOLERANCES (ZN 4-3, C5-3, D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. C
CHECKED	RF	D206-667-243	SHEET 1 OF 4
MFG. APPR.	RF	TITLE	SCALE
APPROVED	RF	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DE APPR.	RF	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	08.11.06		



DESIGN	90	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	11	DRAWING NO.	REV. C
MFG. APPR.	11	D206-667-243	SHEET 2 OF 4
APPROVED	11	TITLE	SCALE
DE APPR.	11	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



SEE DETAIL L  
B7-4



BCW #11-615  
11.07.28

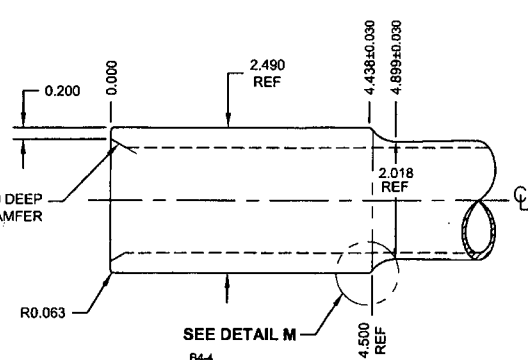
UNDER REVIEW  
4/1/03

**TURNING DETAIL**

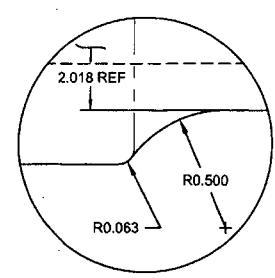
DEO ATTACHED

9

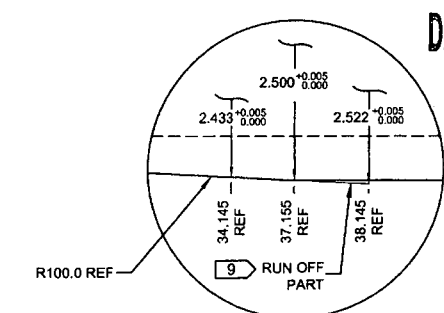
30° X 0.500 DEEP CHAMFER



C7-4 **DETAIL L: CROSSTUBE CUFF**  
NOT TO SCALE



B6-4 **DETAIL M: CUFF TRANSITION**  
NOT TO SCALE



C4-4 **DETAIL N: TAPER RUN-OFF**  
NOT TO SCALE

RELEASED  
08/11/06

DESIGN	9	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	4	DRAWING NO.	REV. C
MFG. APPR.	4	D206-667-243	SHEET 4 OF 4
APPROVED	4	TITLE	SCALE
DE APPR.	4	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DRAWING NO. D206-667-243	TITLE CROSSTUBE ASS'Y (206L HIGH AFT)	REV. C	<b>DART AEROSPACE LTD ENGINEERING ORDER</b>		D.E.O. NO. D206-667-243-C-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>q2</i>	CHECKED <i>ASS</i>	MFG. APPR. <i>RB</i>	APPROVED <i>MP</i>		DE APPR. <i>#</i>		
DATE 11.07.15	DATE 11.07.20	DATE 11.07.21	DATE 11/07/21		DATE 11.07.21		

**PURPOSE:**

REPLACE MAGNOBOND WITH PROSEAL.

**CHANGE:**

IS:

Item	Qty -243	Part Number	Description
9	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

WAS:

9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
---	-----	----------------	---

NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 12) TO INSTALL D2892-1 SUPPORT: ABRABE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. **PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.**

WAS:

- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

**RELEASED**  
2011-07-28  
*MP*

June 17th 08

**Batch:**

**D206-667-203 Folio**

2.5 Rollers w/1.6" shim underneath X 3

3.125" Shim in buggy

All programs run with long end of tube on **large table**.

Tube should be marked @

**19.375"** from cuff

**37" RED** from cuff

then centerline 52.4375" ish...

**First Step - Approach Y @ 3290 and 1500 on W.**

Run programs 206a 1-2-3-4 from **37 line**.

Program 4 stops at 19.375 line. Program 10 will start at that line, then all other programs return to that spot. Run 10-14 without stopping, Flip, Then Repeat same operations for second side. Then check.

**Second step - Approach Y @ 3340 & 3440 on W**

Run program 15 - 25 as needed.

**NOTES:**

October 14, 2010 - ran 19, 19c,e, then 20 to get 41.98 @ 23.6 for height. Tube was even. another tube finished at program 25.

Jan 7-11 Ran 2 tubes, tubes were to high. Changed tangent line from 19.5 to 19.375 check next time around. Both tubes were still ok. tubes finished with program 15.

June 6-11 Ran program 15, 15a, 15b and 19 (checked each time program was run on both side) with tangent line change at 37 and tangent line 19.375, with the changes tube was ok. 1/2 span was 41.937 and 41.960. height was 23.625 on both sides and angles of 54.4 and 54.6

Sept 28/11 after prog 14 we were 1" away. ran 15, skipped 15 a and b, ran 19. still 3/4" away 15 a and b are obsolete. jw

13-02-27 program 19d under revision, one line backs up by 45 points for no apparent reason.

**Passes:**

~~1~~  
~~2~~  
~~3~~  
~~4~~  
~~5~~  
~~6~~  
~~7~~  
~~8~~  
~~9~~  
~~10~~  
~~11~~  
~~12~~  
~~13~~  
~~14~~  
~~15~~  
~~16~~  
~~17~~  
~~18~~  
~~19A~~  
~~19B~~

~~1~~  
~~2~~  
~~3~~  
~~4~~  
~~5~~  
~~6~~  
~~7~~  
~~8~~  
~~9~~  
~~10~~  
~~11~~  
~~12~~  
~~13~~  
~~14~~  
~~15~~  
~~16~~  
~~17~~  
~~18~~  
~~19A~~ X2  
19B



**skyservice****Work Order Traveler**  
Sky Service F.B.O. Inc.

Page: 1 of 1

DOT APP 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO21730	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: 25318
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN: 0	CSN: 0	TSO: 0	
Task: UNSCHEDULED			Sequence: 1

**Work Required:****CARRY OUT NDT INSPECTION (LIQUID PENETRANT) ON 6 CROSSTUBES**

ITEM ID: D206-667-203BL

1 - WORK ORDER ID#: 122764

2 - WORK ORDER ID#: 122768

3 - WORK ORDER ID#: 122769

ITEM ID: D212-664-201

4 - WORK ORDER ID#: 119715

5 - WORK ORDER ID#: 119716

6 - WORK ORDER ID#: 123172

<b>Action Taken:</b>						Date:	Initial/Stamp:
LIQUID PENETRANT INSPECTION CARRIED OUT ON ITEMS LISTED ABOVE (ITEMS 1-6) AS PER ASTM1417M-13						AUG 07 2014	
NO CRACK FOUND							
Pen: ZL-56 BATCH# 09H094 EXP. DATE: AUG 2014, DEV: SKD-S2 EXP. DATE: OCT2017 CLEANER: SKC-S EXP. DATE: APR 2018							
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp 	Date:
Name: ANTONINO MARCHETTA		AUG 07 2014





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*PO REPRINT\*\*\*

Purchase Order ID PO25318

Purchase Order Date 8/7/2014

PO Print Date 8/15/2014

Page Number 1 of 3

Order From :  
SKYSERVICE  
6120 MIDFIELD ROAD  
MISSISSAUGA, ONTARIO L5P 1B1  
CANADA

VC-SKY001

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 905-678-5636

Buyer Michael Gregoire  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB FCA - (Free Carrier)

Ship To Contact  
Ship To Phone

Ship Via Delivered  
Ship Acct

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req. Qty/ Unit of Measure	PO Unit Price	Extended Price
2	71401-45  Procurement Quality Clauses A005 right of entry A012 chemical and physical test report A020 non-destructive test/inspection identification A021 dart aerospace processing A024 process certifications A026 certification of material conformance		8/7/2014 No 8/15/2014		0.00 Each	\$0.00	\$0.00
Line Total:							\$0.00
3	122764  To cover the cost of NDT inspection as per ASTM1417M-13 B122764	D206-667-203BL Aft High Crosstube	8/7/2014 No 8/15/2014		1.00 ✓	\$0.00	\$0.00
Line Total:							\$0.00

Note:

8/15/2014

SP14-8-15

**skyservice****Work Order Traveler**  
Sky Service F.B.O. Inc.

Page: 1 of 1

DOT APP 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO21730	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: 25318
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN: 0	CSN: 0	TSO: 0	
Task: <b>UNSCHEDULED</b>			Sequence: 1

**Work Required:****CARRY OUT NDT INSPECTION (LIQUID PENETRANT) ON 6 CROSSTUBES**

ITEM ID: D206-667-203BL

1 - WORK ORDER ID#: 122764 ✓

2 - WORK ORDER ID#: 122768 ✓

3 - WORK ORDER ID#: 122769 ✓

ITEM ID: D212-664-201

4 - WORK ORDER ID#: 119715 ✓

5 - WORK ORDER ID#: 119716 ✓

6 - WORK ORDER ID#: 123172 ✓

<b>Action Taken:</b>						Date:	Initial/Stamp:
LIQUID PENETRANT INSPECTION CARRIED OUT ON ITEMS LISTED ABOVE (ITEMS 1-6) AS PER ASTM1417M-13						AUG 07 2014	
NO CRACK FOUND							
Pen: ZL-56 BATCH# 09H094 EXP. DATE: AUG 2014, DEV: SKD-S2 EXP. DATE: OCT2017 CLEANER: SKC-S EXP. DATE: APR 2018							
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp 	Date: AUG 07 2014
Name: <b>ANTONINO MARCHETTA</b>		